



Long-Term Surveillance and Maintenance Program

2001 Annual Site Inspection and Monitoring Report for Uranium Mill Tailings Radiation Control Act Title I Disposal Sites

January 2002



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Long-Term Surveillance and Maintenance Program

2001 Annual Site Inspection and Monitoring Report for Uranium Mill Tailings Radiation Control Act Title I Disposal Sites

January 2002

Prepared for U.S. Department of Energy Idaho Operations Office Grand Junction, Colorado

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Acronyms

BLM	U.S. Bureau of Land Management
CFR	Code of Federal Regulations
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
GJO	Grand Junction Office
MCL	maximum concentration limit
mg/L	milligrams per liter
NRC	U.S. Nuclear Regulatory Commission
PCB	polychlorinated biphenyls
pCi/L	picocuries per liter
PL	Photo Location
TDS	total dissolved solids
UMTRA	Uranium Mill Tailings Remedial Action [Project]
UMTRCA	Uranium Mill Tailings Radiation Control Act of 1978 (88 USC 7901, et seq.)

Executive Summary

This report presents the results of inspections, maintenance, and monitoring by the U.S. Department of Energy (DOE) in 2001 at the 19 uranium mill tailings disposal sites established under Title I of the Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978¹. Results of 2001 activities are compared to license requirements. All UMTRCA Title I disposal sites remain in compliance with license requirements.

DOE operates eighteen UMTRCA Title I sites under a general license granted by the U.S. Nuclear Regulatory Commission at Title 10 *Code of Federal Regulations* Part 40.27. The 19th site, Grand Junction, Colorado, will not be licensed until an open, operating portion of the cell is filled and closed, perhaps in 2023.

The Long-Term Surveillance and Maintenance Program at the DOE Grand Junction, Colorado, Office is responsible for providing stewardship services for these and other DOE disposal and containment sites. These services include site inspections and maintenance, monitoring of environmental media and institutional controls, conducting any necessary corrective action, and performing administrative, records, stakeholder participation, and other regulatory functions.

Site inspections, maintenance, and monitoring are conducted in accordance with site-specific Long-Term Surveillance Plans and procedures established by DOE to comply with license requirements. This report fulfills a specific license requirement. Program plans and inspection results are available on the Internet at www.gjo.doe.gov.

As a license condition, each site is inspected annually. The purposes of the annual inspection are to confirm the integrity of visible features at the site; to identify changes or new conditions that may affect the long-term performance of the site; and to determine the need, if any, for maintenance or follow-up inspections and monitoring. Some sites require routine maintenance, but most maintenance is performed as needed.

DOE conducted six nonroutine maintenance activities² in 2001:

- Canonsburg, Pennsylvania—reconstructing the eroded streambank along Area C;
- Maybell, Colorado—hardening erosion control structures;
- Slick Rock, Colorado—regrading and revegetating the spoils pile;
- Rifle, Colorado—commencing to extract transient drainage water from within the cell;
- Shiprock, New Mexico—repairing erosion damage to the site periphery; and
- Decommissioning 66 unneeded monitor wells at seven sites.

Results of the annual site inspections and other site activities performed by the Long-Term Surveillance and Maintenance Program are reported in the site-specific chapters that follow. Significant actions and issues at each site are summarized in the following table, which includes an index number for each item that can be found in the left margin next to the corresponding text in the site chapter. Minor or incidental activities are described in the individual site chapters.

¹ Congress directed that the Moab, Utah, processing site be remediated under Title I of UMTRCA; this eventually will become the twentieth Title I disposal site.

²Nonroutine activities are defined in the *Long-Term Surveillance and Maintenance Program Plan*, (GJO-99-93-TAR, June 1999) as activities conducted once or on an as-needed basis.

Site	Chapter	Page	Index No.	Actions and Issues	
Ambrosia Lake, New Mexico	1	1–2 1–2	1A 1B	Replaced missing perimeter sign. Unneeded monitor wells decommissioned.	
THOM INCARGO		2–2	2A	Repaired fence where tree had fallen on it.	
		2-2,5,7,8	2B	Implement revised Long-Term Surveillance Plan after U.S. Nuclear	
Burrell,	2	2			Regulatory Commission review and concurrence.
Pennsylvania		2–2,3,5	2C	Maintenance: fence, boundary monument, vegetation control.	
		2–5	2D	Vegetation encroachment.	
		2–6 3–2	2E 3A	Ground-water monitoring; no access to two wells. Two monitor wells destroyed by contractors, one replaced.	
		3–5	3B	Maintenance: vegetation control, replace sign.	
Canonsburg,		3–5	3C	Access needed for monitor wells on Area C.	
Pennsylvania	3	3–6	3D	Bank stabilization project completed.	
xi -		3–6	3E	Compliance with Ground Water Compliance Action Plan initiated.	
		3–6	3F	Ground-water monitoring.	
		4–2	4A	Ongoing vandalism.	
Durango,		4-2	4B	Unneeded monitor wells decommissioned.	
Colorado	4	4–5	4C	Vegetation encroachment.	
		45 46	4D 4E	Cell drain remains open during warm season.	
		5–2	5A	Ground-water monitoring. Unneeded monitor wells decommissioned.	
		5–2,5	5B	Vegetation encroachment.	
Falls City,	5	5–5	5C	Maintenance: fence repairs, vegetation control.	
Texas		5–6	5D	Ground-water monitoring.	
		5–9	5E	Compliance with Ground Water Compliance Action Plan initiated.	
		6–2	6A	Maintenance: fence repairs.	
Grand Junction,		6–2	6B	Unneeded monitor wells decommissioned.	
Colorado	6	6–5	6C	Vegetation encroachment.	
		6–7 6–7	6D 6E	Ground-water monitoring. Radioactive/PCB waste disposal.	
Green River,	-	7–5	7A	Maintenance: replaced missing sign, vegetation control.	
Utah	7	7–5	7B	Ground-water monitoring.	
		8–2	8A	Decommissioned unneeded monitor wells.	
Gunnison,	8	8–5	8B	Inspected condition of riprap in test areas.	
Colorado	0	8–6	8C	Expansion of County landfill operations.	
		8–7	8D	Ground-water monitoring.	
Lakeview,		9–2	9A	Vegetation encroachment.	
Oregon	9	9–5 9–6	9B 9C	Riprap gradation tests continued, riprap size calculation evaluated. Maintenance: fence repairs.	
		10-2	10A	Vegetation encroachment.	
Lowman, Idaho	10	10-5	10B	Ground-water monitoring.	
201111011, 100110		10–6	10C	Revised Long-Term Surveillance Plan in preparation.	
		11–2	11A	Maintenance: replaced missing sign.	
Maybell,	11	112	11B	Re-survey of settlement plates.	
Colorado	''	11–5	11C	Hardened erosion control structures.	
		11–6	11D	Water level measurements show no local effect.	
Mexican Hat,	12	12–2	12A	Maintenance: two sign posts loose.	
Utah		12–5 13–5	12B 13A	Surface water and ground-water monitoring.	
Naturita,		13–5	13A 13B	Vegetation slow to establish. Perpetual easement for associated drainage structures.	
Colorado	13	13–5	13C	Ground-water monitoring.	
J0101000		13–7	13D	Water level in disposal cell.	
		14-2	14A	Replaced entrance sign.	
Rifle, Colorado	14	14–2	14B	Unneeded monitor wells decommissioned.	
		14–5,6	14C	Removal of intracell water.	
Salt Lake City,		15–1	15A	Access blocked/restored.	
Utah	15	15–2,5	15B	Maintenance: replace perimeter signs, uncover buried monument in	
		40.00	40.	2002.	
		16-2,6	16A	Gravel pit operations.	
Chinrock		16–2	16B	Russian thistle accumulations.	
Shiprock, New Mexico	16	16–5 16–5	16C 16D	Unneeded monitor wells decommissioned. Vegetation encroachment.	
TACM MICKICO				•	
		16–6	16E	Investigation of moisture in cell cover.	

2001 Summary of UMTRCA Title I Site Issues and Status (continued)

Site	Chapter	Page	Index No.	Actions and Issues
		17–2	17A	Maintenance: fence repairs.
		17–2	17B	Decommission all seven monitor wells.
Slick Rock,	17	17–5	17C	Establishment of vegetation.
Colorado	17	17–5	17D	Regraded and reseeded spoils pile.
		17–5	17E	Water level measurements (submitted request for concurrence that requirements are met).
Spook, Wyoming	18	4-317.44		No actions or issues.
		19–2	19A	Active ground water remediation activities.
Tuba Citu		19–2	19B	Maintenance: fence repair.
Tuba City,	19 19-2	19–2	19C	Vegetation encroachment.
Arizona		19–5	19D	Accumulation of windblown sand and Russian thistle.
		19–5	19E	Ground-water monitoring.

End of current text

2001 Annual Compliance Report Canonsburg, Pennsylvania, Disposal Site

Compliance Summary

The site, inspected on October 31, 2001, was in excellent condition. The grass is mowed annually and is healthy. Trees and shrubs continue to be cleared from the security fence, diversion channels, and perimeter ditches every 2 to 3 years or as needed. The last major clearing was in 1999 and was not required in 2001. Three perimeter signs were missing. Although Area C is not part of the disposal site, the bank downstream from the site along Chartiers Creek at Area C was eroding. A project to stabilize the erosion was begun in November 2000 and completed in May 2001. The site inspection indicated that efforts to stabilize and revegetate the bank were successful. Two ground-water wells were destroyed and one replaced during the year. Groundwater monitoring showed that uranium concentrations remained above the maximum concentration limit at two of three sampled downgradient wells. In addition to annual grass mowing and other vegetation management, the inspectors identified the need to replace the missing perimeter signs and one monitor well in 2002.

Compliance Requirements

Requirements for the long-term surveillance and maintenance of the Canonsburg, Pennsylvania, Uranium Mill Tailings Radiation Control Act (UMTRCA) Title I disposal site are specified in the Long-Term Surveillance Plan for the Canonsburg, Pennsylvania, Disposal Site (DOE/AL/62350-203, Rev. 0, U.S. Department of Energy [DOE], Albuquerque Operations Office, October 1995) and in procedures established by the DOE Grand Junction Office to comply with requirements of Title 10 Code of Federal Regulations Part 40.27 (10 CFR 40.27). These requirements are listed in Table 3–1.

Table 3–1. License Requirements for the Canonsburg, Pennsylvania, Disposal Site

Requirement	Long-Term Surveillance Plan	This Report
Annual Inspection and Report	Sections 3.1 and 7.0	Section 1.0
Follow-up or Contingency Inspections	Section 3.2 and 6.2, Appendix E.4	Section 2.0
Routine Maintenance and Repairs	Section 6.1	Section 3.0
Ground-Water Monitoring	Section 4.0 and the GCAP ^a	Section 4.0
Corrective Action	Section 4.4	Section 5.0

^aGround Water Compliance Action Plan, February 2000.

Compliance Review

Annual Site Inspection and Report 1.0

The site, located between the communities of Canonsburg and Houston, Pennsylvania, was inspected on October 31, 2001. Features and photo locations mentioned in this report are shown on Figure 3-1. Numbers in the left margin of this report refer to items summarized in the Executive Summary table.

1.1 Specific Site Surveillance Features

Access, Fence, Gates, and Signs—Access to the site is directly from Strabane Avenue.

The site is surrounded by a chain-link security fence with three strands of barbed wire at the top. The fence is generally in excellent condition, although it is beginning to rust. From the far western corner of the site, north along the top of the bank above Chartiers Creek, to near perimeter sign P5, the concrete "boot" at the bottom of several fence posts is exposed. Inspectors have been watching these posts since the site was first inspected in 1990. So far, the exposure of concrete has not increased, and there is no sign of new erosion, slumping, or movement of soil away from the posts. All fence posts are firmly secure.

The entrance gate is at the southeast corner of the site along Strabane Avenue; a personnel gate is in the east fence line near monitor well 0413. The personnel gate has not been used in recent years but appears functional. Padlocks on both gates have to be replaced every 3 to 4 years because of corrosion in the humid climate.

The site has an entrance sign at the entrance gate and 11 perimeter signs. Perimeter signs P3, P7, and P8 were missing. The remaining signs are mounted on the chain-link fence and are in excellent condition.

Site Markers and Monuments—The two site markers, three survey monuments, and four boundary monuments are undisturbed and in excellent condition.

Erosion control markers along the bank of Chartiers Creek are undisturbed. One of these markers, ECM-4A, was lost to erosion in 1996. No new erosion was noted along the bank during this year's inspection.

Monitor Wells—The ground-water monitoring network consists of six monitor wells: 0406, 0410, 0412, 0413, 0414, and 0424. Monitor well 0414 was destroyed during the Chartiers Creek stream bank stabilization project. A replacement well, 0414A, was installed in May 2001. This well is located approximately 7 feet west and 2 feet north of the destroyed monitor well 0414. Another well, 0406, was destroyed in October 2001 during a sewer installation project unrelated to the disposal site (Figure 3–3); replacement is scheduled for 2002. All remaining wells are secured with a cap-and-pin locking system and a standard padlock. Other than the need to replace corroded padlocks every 3 to 4 years, the wells are in excellent condition.

1.2 Transects

To ensure a thorough and efficient inspection, the site was divided into five areas called transects: (1) the disposal cell, (2) the diversion channels and perimeter ditches, (3) the other areas on site, (4) the site perimeter, and (5) the outlying area.

Disposal Cell—The disposal cell is a grass-covered knoll in excellent condition. The grass is mowed and mulched annually, most recently in July 2001. There is no evidence of slumping, settling, erosion, or other modifying process.

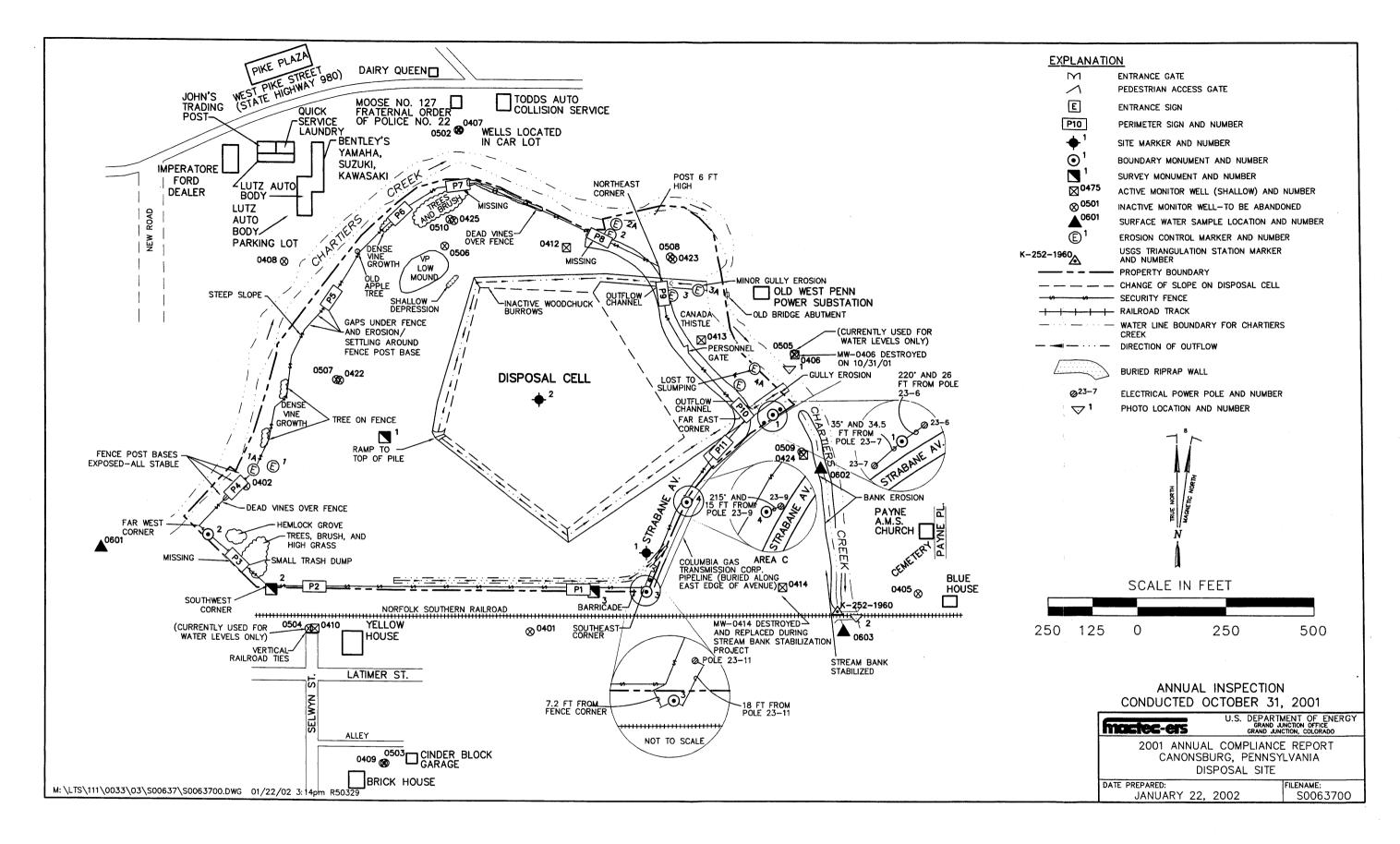


Figure 3-1. 2001 Compliance Drawing for the Canonsburg, Pennsylvania, Disposal Site

Diversion Channels and Perimeter Ditches—Diversion channels around the disposal cell and the perimeter ditch along the south and east sides of the site are armored with riprap and are in excellent condition.

Vegetation is cleared from the diversion channels and perimeter ditch every 2 or 3 years, or as needed, to ensure their capacity to carry runoff from a large storm event. In 1998, vegetation was treated with herbicide, and in 1999, dead plant material was removed from the channels and ditch. Similar work may be required in 2002.

In 1998, the spillway below the confluence of the eastern diversion channel and the perimeter ditch was rebuilt to correct an erosion problem. The new riprap-covered spillway is functioning as designed and erosion is no longer a problem at this location.

Other Areas On Site—Thick grass covers the area from the diversion channels around the disposal cell outward to the security fence. This stand of grass extends beyond the security fence toward the creek from about erosion control marker ECM—2 eastward to the Strabane Avenue Bridge. The grass, mowed and mulched annually, is in excellent condition.

Several groves of large trees and bushes are in this transect. Dead trees and branches are removed periodically from these groves. The entire area inside the fence is park-like and well kept.

Site Perimeter—Annual mowing of the grass does not prevent trees, grass, and heavy brush from growing on and through the security fence. The biomass is considerable and has the potential to damage the fence unless it is removed. DOE mows a swath (as far as possible) on both sides of the fence with a tractor and bush hog. Where terrain is too steep for the tractor, the vegetation is cleared by hand. Vegetation intertwined in the fence or weighing it down is also cleared by hand. This action also includes application of herbicide along the bottom of the fence to retard reappearance of vegetation. Not only does removal of vegetation preserve and maintain the fence, it significantly improves the appearance of the site and allows a better inspection of the fence and site perimeter.

Outlying Area—The site is surrounded by residential and commercial property. The area outward for a distance of approximately 0.25 mile was visually inspected for development or change in land use that might affect the safety or security of the site. None was seen; the neighborhood is unchanged.

Area C is a triangular, grass-covered property across Strabane Avenue east of the site. Area C was involved in remedial action and is owned by the Commonwealth of Pennsylvania. It is not part of the disposal site. Pennsylvania may eventually convey Area C to a local government. The commonwealth understands that the deed for Area C, if transferred to the local government, will carry restrictions prohibiting (1) excavation deeper than 6 feet, (2) residential use of the property, and (3) use of the ground water. DOE has not yet been successful in establishing a recorded easement to the wells on Area C. This effort continues.

DOE continues to cut the grass at Area C as a courtesy to the commonwealth.

Over the years since the completion of remedial action, erosion had occurred along the western bank of Chartiers Creek at Area C. To address this problem, DOE reconstructed and revegetated 3D the bank between December 2000 and May 2001. The site inspection indicated that stabilization efforts were successful (Figure 3–4). Grasses have successfully established on the slope of the stream bank, and willow plantings are beginning to take hold.

2.0 **Follow-up or Contingency Inspections**

No follow-up or contingency inspections were required in 2001.

3.0 **Routine Maintenance and Repairs**

In addition to annual grass moving and other measures to manage and control vegetation, inspectors identified the need to replace three perimeter signs and monitor well 0406 in 2002.

4.0 **Ground-Water Monitoring**

DOE monitors ground water as a best management practice to evaluate contaminant trends in the shallow unconfined aguifer and to comply with the Ground Water Compliance Action Plan approved by the U.S. Nuclear Regulatory Commission in January 2000.

The unconfined aquifer consists of unconsolidated soils, stream deposits, and clean fill. There is remnant contamination, with concentrations below the clean-up standard, in the soils and stream deposits that pre-date remediation.

The ground-water monitoring network consists of six wells (Table 3-2). All wells are completed in the shallow unconfined aquifer.

The original Long-Term Surveillance Plan required sampling for 2 years after the site was licensed. This requirement was met by sampling in 1996 and 1997. However, because the concentration of uranium in some wells continues above the maximum concentration limit of 0.044 milligrams per liter (mg/L), DOE continues to monitor annually.

DOE will monitor for at least 5 years (through 2004), or for as long as 30 years (through 2029), to verify compliance with alternate concentration limits established by the Ground Water Compliance Action Plan.

3E 3F

Table 3–2. Ground Water and Surface Water Sampling Locations at the Canonsburg, Pennsylvania, Disposal Site

Origi	Sample Locations nal Long-Term Surveillance Plan (DOE 1995)	Sample Locations Ground Water Compliance Action Plan (DOE 2000) Four monitor wells:				
Six monitor w	vells:					
0410 0406	Upgradient well Downgradient well	0406 0412	Downgradient well Downgradient (POC) well			
0408	Downgradient well	0413	Downgradient (POC) well			
0413	Downgradient well	0414	Crossgradient (POC) well			
0424	Downgradient well					
0414	Crossgradient well					
Three surface water (creek) locations:		One surfa	ce water (creek) location:			
0601	Upstream from disposal cell	0602	POE location adjacent to Area C			
0602	Adjacent to Area C					
0603	Downstream at railroad bridge					

Note: POC = point of compliance POE = point of exposure

The Long-Term Surveillance Plan identifies molybdenum and uranium as the target analytes. Under the Ground Water Compliance Action Plan, there are three target analytes: manganese, molybdenum, and uranium. Standards in the form of maximum concentration limits for molybdenum and uranium are established by the U.S. Environmental Protection Agency in 40 CFR 192, Table 1 of Subpart A. There is no standard for manganese. The performance standard adopted by the Ground Water Compliance Action Plan for manganese is the secondary drinking water standard established in 40 CFR 143.3.

Tables 3-3 and 3-4 present results of sampling in 2001.

Table 3-3. Summary of Ground-Water Sample Results at the Canonsburg, Pennsylvania, Disposal Site

			Ground-Water Sample Location							
Analyte	MCL ^a	Year	0410 (up- gradient)	0406 (down- gradient)	0412 (down- gradient)	0413 (down- gradient)	0424 (down- gradient)	0414 (cross- gradient)		
		1998	2.940	7.960	22.800	2.560	6.540	2.440		
		1999	2.690	5.410	20.400	2.140	6.200	1.710		
Manganese	0.05	2000	3.110	0.915	21.100	2.750	5.810	3.120		
		2001	3.160	Well Missing	22.300	2.610	6.120	7.010 ^c		
		1998	0.001	0.0039 ^b	0.0011 b	0.0034 ^b	0.001 b	0.019		
		1999	0.0008 b	0.0035 ^b	0.0008 ^b	0.0025 b	0.0014 ^b	0.0108		
Molybdenum	0.10	2000	0.0004 b	0.010	0.00047 b	0.0029 ^b	0.0018 ^b	0.0168		
		2001	0.0019 ^b	Well Missing	0.0019 ^b	0.0019 ^b	0.0019 ^b	0.0019 b,c		
		1998	0.001 ^b	0.0034	0.113	0.140	0.001 b	0.0441		
		1999	0.0002 ^b	0.010	0.0544	0.164	0.0002 b	0.0187		
Uranium	0.044	2000	0.00017 b	0.0457	0.0536	0.139	0.00021 b	0.0265		
		2001	0.0006 ^b	Well Missing	0.0536	0.0914	0.00058 b	0.0019 ^c		

All results are in milligrams per liter.

^aMCL = maximum concentration limit established in 40 CFR 192 for uranium and molybdenum; manganese standard is the secondary drinking water standard from 40 CFR 143.3.

^bUndetected or less than the required detection limit.

^cSamples collected from newly installed well 0414A.

Table 3-4. Summary of Surface-Water Sample Results at the Canonsburg, Pennsylvania, Disposal Site

	_		Surface Water Sample Location				
Analyte	MCL	Year	0601 (upgradient)	0602 (downgradient)	0603 (downgradient)		
		1998	0.0880	0.0803	0.0746		
Manganese	0.05	1999	0.111	0.0994	0.0847		
wanganese	0.05	2000	0.0673	0.0736	0.0773		
		2001	0.0952	0.0038 b	0.0928		
		1998	0.119	0.112	0.108		
Molybdenum	0.10	1999	0.0961	0.0987	0.0898		
Worybaeriani	0.10	2000	0.0583	0.101	0.068		
		2001	0.0464	0.0398	0.0395		
		1998	0.001 b	0.001 ^b	0.001 6		
Uranium	0.044	1999	0.0002 b	0.0002 b	0.0002°		
Oranium	0.044	2000	0.00056 b	0.00067 b	0.00068		
		2001	0.00094 b	0.001	0.0011		

All results are in milligrams per liter.

Manganese levels exceed the secondary drinking water standard at all sampled wells by 2 to 3 orders of magnitude. Results from October 2001 are consistent with results from the past 3 years, with one exception. The manganese concentration in well 0414A was higher than in previous years. As noted in Section 3.0, this well was replaced in spring 2001. The concentration increase may be related to installation of the new well.

Manganese concentrations are nearly double the secondary drinking water standard at surface water (Chartiers Creek) sampling locations 0601 and 0603 and are consistent with previous results. The concentration at location 0602, immediately downstream of the stream bank stabilization area, dropped by more than an order of magnitude and is significantly below the standard. The reason for the drop is unknown, but may be due in part to the elimination of bank erosion.

Molybdenum concentrations were below the laboratory reporting limit and significantly below the maximum concentration limits in all ground water samples collected in October 2001.

The concentration of molybdenum in the creek samples, as in the past, was higher than in ground-water samples at the wells. The elevated levels in the creek indicate a significant ambient or upstream source of molybdenum. The disposal cell cannot be a significant contributor of molybdenum. The concentration of molybdenum at all three creek sampling locations was less than reported in the three previous years, and in all cases was below the 0.1 mg/L standard.

Uranium is the analyte of primary concern at this site because of the frequency with which it has exceeded its standard of 0.044 mg/L. Figure 3-2 shows time-concentration plots for uranium. Plots for well 0410, the upgradient well, and 0424, a downgradient well, are not shown because uranium concentrations at these wells are near or below the detection limit.

^aMCL = maximum concentration limit established in 40 CFR 192 for uranium and molybdenum; manganese standard is the secondary drinking water standard from 40 CFR 143.3.

^bUndetected or less than the required detection limit.

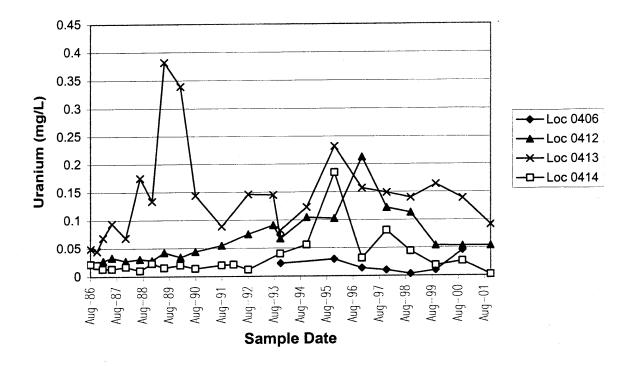


Figure 3-2. Time-Concentration Plot of Uranium in Ground Water at the Canonsburg, Pennsylvania, Disposal Site

In 2001, uranium concentration exceeded the standard at two of the three sampled downgradient wells: 0412 and 0413. All results are consistent with previous results. Although long-term trends in the data are conjectural, short-term trends, since about 1995, may be developing. DOE is cautious on this point because of the wide variations in the historical results (Figure 3-2).

Uranium concentrations have been decreasing since about 1995 at the downgradient wells. The greatest exceedance this year was at well 0413, where the highest levels of uranium have been reported in the past. Uranium concentration was below the required laboratory detection limit at all sampling locations in Chartiers Creek.

The elevated concentration of uranium at some wells, and the wide fluctuations in uranium at these wells over the years, are probably unrelated to disposal cell performance for the following reasons: (1) there is remnant contamination outside the disposal cell; (2) the geochemistry of ground water in the unconsolidated materials beneath the disposal cell is apparently favorable for the mobilization of uranium; and (3) high levels of uranium existed in ground water before construction of the disposal cell. These considerations were discussed at length in previous annual reports.

DOE continues to consider the risk associated with uranium in ground water to be negligible because institutional controls prevent access to the ground water, and the uranium levels have no detectable effect on the chemistry of water in Chartiers Creek. Thus, public health and the environment are adequately protected.

5.0 Corrective Action

Corrective action is action taken to correct out-of-compliance or hazardous conditions that create a potential health and safety problem or that may affect the integrity of the disposal cell or compliance with 40 CFR 192.

No corrective action was required in 2001.

6.0 Photographs

Table 3-5. Photographs Taken at Canonsburg, Pennsylvania, Disposal Site

Photograph Location Number	Azimuth	Description
PL-1	240	Displaced cap of destroyed monitor well 0406
PL-2	355	Stabilized western bank of Chartiers Creek at Area C



PL-1. Displaced Cap of Destroyed Monitor Well 0406



PL-2. Stabilized Western Bank Of Chartiers Creek at Area C